

Appl. No. : 10/758,774
Filed : January 16, 2004

CLAIM AMENDMENTS:

WE CLAIM:

1. (Currently Amended) A disposable cleaning substrate comprising:
 - a. 57-80% cellulosic fibers, wherein said cellulosic fibers are present throughout said substrate and wherein said cellulosic fibers vary from less than about 25% on one side of said substrate to greater than about 75% on the other side of said substrate, and
 - b. 8-21% higher denier thermoplastic fibers of about 2 to 6 denier, wherein said thermoplastic fibers are concentrated on the side of said substrate having lower cellulosic content,
 - c. 9-11% thermal bonding bicomponent fibers; and
 - d. 3-11% latex binder;
 - e. wherein said substrate has a coefficient of static friction greater than 0.600 ~~and less than 0.900, and~~
 - f. wherein said substrate has a coefficient of kinetic friction greater than 0.400 ~~and less than 0.800; and~~
 - g. wherein said substrate does not comprise nodulated abrasive fiber remnants.
2. (Cancelled)
3. (Cancelled)
4. (Currently Amended) The substrate of claim 3 1, wherein said binder has a Tg greater than 0° C.
5. (Currently Amended) The substrate of claim 3 1, wherein said binder has a Tg greater than 20° C.
6. (Currently Amended) The substrate of claim 3 1, wherein said binder has a Tg greater than 30° C.
7. (Original) The substrate of claim 1, wherein said substrate is a wet wipe.
8. (Original) The substrate of claim 1, wherein said substrate is a dry wipe.
9. (Original) The substrate of claim 1, wherein said substrate further comprises surfactants in a cleaning effective amount.

Appl. No. : 10/758,774
Filed : January 16, 2004

10. (Original) The substrate of claim 1, wherein said substrate further comprises surfactants in a cleaning effective amount and is dry-to-the-touch.
11. (Original) The substrate of claim 1, wherein said substrate is attached to a cleaning device or implement.
12. (Original) The substrate of claim 11, wherein said substrate further comprises surfactants in a cleaning effective amount.
13. (Original) The substrate of claim 11, wherein said substrate is attached to a cleaning device comprising a floor mop.
14. (Original) The substrate of claim 11, wherein said substrate is attached to a cleaning device selected from a group consisting of a toilet cleaning device, a bathroom cleaning device, and a shower cleaning device.
15. (Original) The substrate of claim 1, wherein said substrate is part of a mitt or glove.
16. (Original) The substrate of claim 15, wherein said substrate further comprises surfactants in a cleaning effective amount.
17. (Original) The substrate of claim 1, wherein said substrate is of unitized, airlaid construction.
18. (Original) The substrate of claim 1, wherein said cellulosic fibers comprise at least about 5% of the side of said substrate having lower cellulosic content.
19. (Original) The substrate of claim 1, wherein said thermoplastic fibers comprise less than about 30% of said total cleaning substrate.
20. (Original) The substrate of claim 1, wherein said substrate has a bulk density of less than about 0.10 g/cc.
21. (Original) The substrate of claim 20, wherein said substrate has a thickness greater than about 2 mm.
22. (Original) The substrate of claim 20, wherein said substrate has a thickness greater than about 3 mm.
23. (Original) The substrate of claim 20, wherein said substrate has a thickness greater than about 4 mm.
24. (Cancelled)
25. (Cancelled)

Appl. No. : 10/758,774
Filed : January 16, 2004

26. (Previously Presented) The substrate of claim 1, wherein said substrate has a ratio of the coefficient of static friction to coefficient of kinetic of greater than about 1.5.
27. (Original) The substrate of claim 20, wherein said substrate has a MD tensile greater than about 500.
28. (Original) The substrate of claim 20, wherein said substrate has a MD tensile greater than about 700.
29. (Original) The substrate of claim 20, wherein said substrate has a CD tensile greater than about 400.
30. (Original) The substrate of claim 1, wherein said substrate has a bulk density of less than about 0.08 g/cc.
31. (Original) The substrate of claim 1, wherein said substrate has a bulk density of less than about 0.06 g/cc.
32. (Original) The substrate of claim 1, wherein said substrate has a total absorbency greater than about 8 g/g.
33. (Original) The substrate of claim 1, wherein said substrate has a total absorbency greater than about 10 g/g.
34. (Original) The substrate of claim 1, wherein said substrate has a total absorbency greater than about 15 g/g.
35. (Original) The substrate of claim 1, wherein said substrate has an absorbency rate change over 5 doses of less than about 2.5 times.
36. (Original) The substrate of claim 1, wherein said substrate has an absorbency rate change over 5 doses of less than about 2.0 times.
37. (Original) The substrate of claim 1, wherein said substrate has an absorbency rate change over 5 doses of less than about 1.5 times.
38. (Original) The substrate of claim 1, wherein said substrate further comprises superabsorbent materials.
39. (Original) The substrate of claim 38, wherein said superabsorbent materials are limited to a specific area of the substrate.
40. (Original) The substrate of claim 38, wherein said superabsorbent materials are distributed across the cleaning substrate.
41. (Currently Amended) A disposable cleaning substrate comprising:

Appl. No. : 10/758,774
Filed : January 16, 2004

- a. cellulosic fibers, wherein said cellulosic fibers are present throughout said substrate and wherein said cellulosic fibers vary from less than about 25% on one side of said substrate to greater than about 75% on the other side of said substrate; and
 - b. higher denier thermoplastic fibers of about 2 to 6 denier, wherein said thermoplastic fibers are concentrated on the side of said substrate having lower cellulosic content;
 - c. thermal bonding fibers selected from the group consisting of bicomponent fibers, multicomponent fibers and combinations thereof; and
 - d. a binder;
 - e. wherein said substrate has a ratio of the coefficient of static friction to coefficient of kinetic of greater than about 1.5.
42. (Original) The substrate of claim 41, wherein said binder comprises binders selected from a group consisting of liquid emulsions, latex binders, liquid adhesives, chemical bonding agents, and mixtures thereof.
43. (Currently Amended) The substrate of claim 41, wherein said thermal bonding fibers comprise from about 1 to about 20% of said substrate.
44. (Currently Amended) The substrate of claim 41, wherein said thermal bonding fibers comprise from about 5 to about 15% of said substrate.
45. (Original) The substrate of claim 42, wherein said binder is a latex binder.
46. (Original) The substrate of claim 45, wherein said binder has a Tg greater than 0° C.
47. (Original) The substrate of claim 45, wherein said binder has a Tg greater than 20° C.
48. (Original) The substrate of claim 45, wherein said binder has a Tg greater than 30° C.
49. (Original) The substrate of claim 41, wherein said substrate is a wet wipe.
50. (Original) The substrate of claim 41, wherein said substrate is a dry wipe.
51. (Original) The substrate of claim 41, wherein said substrate further comprises surfactants in a cleaning effective amount.
52. (Original) The substrate of claim 41, wherein said substrate further comprises surfactants in a cleaning effective amount and is dry-to-the-touch.
53. (Original) The substrate of claim 41, wherein said substrate is attached to a cleaning device.
54. (Original) The substrate of claim 53, wherein said substrate further comprises surfactants in a cleaning effective amount.

Appl. No. : 10/758,774
Filed : January 16, 2004

- 55. (Original) The substrate of claim 53, wherein said substrate is attached to a cleaning device comprising a floor mop.
- 56. (Original) The substrate of claim 53, wherein said substrate is attached to a cleaning device selected from a group consisting of a toilet cleaning device, a bathroom cleaning device, and a shower cleaning device.
- 57. (Original) The substrate of claim 41, wherein said substrate is part of a mitt or glove.
- 58. (Original) The substrate of claim 57, wherein said substrate further comprises surfactants in a cleaning effective amount.
- 59. (Original) The substrate of claim 41, wherein said substrate is of unitized, airlaid construction.
- 60. (Original) The substrate of claim 41, wherein said cellulosic fibers comprise at least about 5% of the side of said substrate having lower cellulosic content.
- 61. (Original) The substrate of claim 41, wherein said thermoplastic fibers comprise less than about 30% of said total cleaning substrate.
- 62. (Original) The substrate of claim 41, wherein said substrate has a bulk density of less than about 0.10 g/cc.
- 63. (Original) The substrate of claim 62, wherein said substrate has a thickness greater than about 2 mm.
- 64. (Original) The substrate of claim 62, wherein said substrate has a thickness greater than about 3 mm.
- 65. (Original) The substrate of claim 62, wherein said substrate has a thickness greater than about 4 mm.
- 66. (Original) The substrate of claim 62, wherein said substrate has a coefficient of static friction greater than 0.600.
- 67. (Original) The substrate of claim 62, wherein said substrate has a coefficient of kinetic friction greater than 0.400.
- 68. (Cancelled)
- 69. (Original) The substrate of claim 62, wherein said substrate has a MD tensile greater than about 500.
- 70. (Original) The substrate of claim 62, wherein said substrate has a MD tensile greater than about 700.

Appl. No. : 10/758,774
Filed : January 16, 2004

71. (Original) The substrate of claim 62, wherein said substrate has a CD tensile greater than about 400.
72. (Original) The substrate of claim 41, wherein said substrate has a bulk density of less than about 0.08 g/cc.
73. (Original) The substrate of claim 41, wherein said substrate has a bulk density of less than about 0.06 g/cc.
74. (Original) The substrate of claim 41, wherein said substrate has a total absorbency greater than about 8 g/g.
75. (Original) The substrate of claim 41, wherein said substrate has a total absorbency greater than about 10 g/g.
76. (Original) The substrate of claim 41, wherein said substrate has a total absorbency greater than about 15 g/g.
77. (Original) The substrate of claim 41, wherein said substrate has an absorbency rate change over 5 doses of less than about 2.5 times.
78. (Original) The substrate of claim 41, wherein said substrate has an absorbency rate change over 5 doses of less than about 2.0 times.
79. (Original) The substrate of claim 41, wherein said substrate has an absorbency rate change over 5 doses of less than about 1.5 times.
80. (Original) The substrate of claim 41, wherein said substrate further comprises superabsorbent materials.
81. (Original) The substrate of claim 80, wherein said superabsorbent materials are limited to a specific area of the substrate.
82. (Original) The substrate of claim 80, wherein said superabsorbent materials are distributed across the cleaning substrate.
83. (Currently Amended) A disposable cleaning substrate comprising:
 - a. 57-80% cellulosic fibers, wherein said cellulosic fibers vary from less than about 25% on one side of said substrate to greater than about 75% on the other side of said substrate; ~~and~~
 - b. 8-21% higher denier thermoplastic fibers of about 2 to 6 denier, wherein said thermoplastic fibers are concentrated on the side of said substrate having lower cellulosic content;

Appl. No. : 10/758,774
Filed : January 16, 2004

- c. 9-11% thermal bonding fibers selected from the group consisting of bicomponent fibers, multicomponent fibers and combinations thereof, and
 - d. 3-11% binder selected from a group consisting of liquid emulsions, latex binders, liquid adhesives, chemical bonding agents, and mixtures thereof;
 - e. wherein said substrate has a coefficient of static friction greater than 0.600 and less than 0.900.
84. (Cancelled)
85. (Currently Amended) The substrate of claim 83, wherein said ~~multicomponent~~ thermal bonding fibers comprise from about 1 to about 20% of said substrate.
86. (Currently Amended) The substrate of claim 83, wherein said ~~multicomponent~~ thermal bonding fibers comprise from about 5 to about 15% of said substrate.
87. (Currently Amended) The substrate of claim ~~83~~ ~~84~~, wherein said binder is a latex binder.
88. (Original) The substrate of claim 87, wherein said binder has a Tg greater than 0° C.
89. (Original) The substrate of claim 87, wherein said binder has a Tg greater than 20° C.
90. (Original) The substrate of claim 87, wherein said binder has a Tg greater than 30° C.
91. (Original) The substrate of claim 83, wherein said substrate is a wet wipe.
92. (Original) The substrate of claim 83, wherein said substrate is a dry wipe.
93. (Original) The substrate of claim 83, wherein said substrate further comprises surfactants in a cleaning effective amount.
94. (Original) The substrate of claim 83, wherein said substrate further comprises surfactants in a cleaning effective amount and is dry-to-the-touch.
95. (Original) The substrate of claim 83, wherein said substrate is attached to a cleaning device.
96. (Original) The substrate of claim 95, wherein said substrate further comprises surfactants in a cleaning effective amount.
97. (Original) The substrate of claim 95, wherein said substrate is attached to a cleaning device comprising a floor mop.
98. (Original) The substrate of claim 95, wherein said substrate is attached to a cleaning device selected from a group consisting of a toilet cleaning device, a bathroom cleaning device, and a shower cleaning device.
99. (Original) The substrate of claim 83, wherein said substrate is part of a mitt or glove.

Appl. No. : 10/758,774
Filed : January 16, 2004

100. (Original) The substrate of claim 99, wherein said substrate further comprises surfactants in a cleaning effective amount.
101. (Original) The substrate of claim 83, wherein said substrate is of unitized, airlaid construction.
102. (Original) The substrate of claim 83, wherein said cellulosic fibers comprise at least about 5% of the side of said substrate having lower cellulosic content.
103. (Original) The substrate of claim 83, wherein said thermoplastic fibers comprise less than about 30% of said total cleaning substrate.
104. (Original) The substrate of claim 83, wherein said substrate has a bulk density of less than about 0.10 g/cc.
105. (Original) The substrate of claim 104, wherein said substrate has a thickness greater than about 2 mm.
106. (Original) The substrate of claim 104, wherein said substrate has a thickness greater than about 3 mm.
107. (Original) The substrate of claim 104, wherein said substrate has a thickness greater than about 4 mm.
108. (Cancelled)
109. (Original) The substrate of claim 104, wherein said substrate has a coefficient of kinetic friction greater than 0.400.
110. (Original) The substrate of claim 104, wherein said substrate has a ratio of the coefficient of static friction to coefficient of kinetic of greater than about 1.5.
111. (Original) The substrate of claim 104, wherein said substrate has a MD tensile greater than about 500.
112. (Original) The substrate of claim 104, wherein said substrate has a MD tensile greater than about 700.
113. (Original) The substrate of claim 104, wherein said substrate has a C'D tensile greater than about 400.
114. (Original) The substrate of claim 83, wherein said substrate has a bulk density of less than about 0.08 g/cc.
115. (Original) The substrate of claim 83, wherein said substrate has a bulk density of less than about 0.06 g/cc.

Appl. No. : 10/758,774
Filed : January 16, 2004

116. (Original) The substrate of claim 83, wherein said substrate has a total absorbency greater than about 8 g/g.

117. (Original) The substrate of claim 83, wherein said substrate has a total absorbency greater than about 10 g/g.

118. (Original) The substrate of claim 83, wherein said substrate has a total absorbency greater than about 15 g/g.

119. (Original) The substrate of claim 83, wherein said substrate has an absorbency rate change over 5 doses of less than about 2.5 times.

120. (Original) The substrate of claim 83, wherein said substrate has an absorbency rate change over 5 doses of less than about 2.0 times.

121. (Original) The substrate of claim 83, wherein said substrate has an absorbency rate change over 5 doses of less than about 1.5 times.

122. (Original) The substrate of claim 83, wherein said substrate further comprises superabsorbent materials.

123. (Original) The substrate of claim 122, wherein said superabsorbent materials are limited to a specific area of the substrate.

124. (Original) The substrate of claim 122, wherein said superabsorbent materials are distributed across the cleaning substrate.

REMARKS

Amendments to the Claims and Specification

Claims 1, 4-6, 41, 43-44, 83, and 85-7 have been amended.

Claims 24, 25, 68, and 108 have been cancelled.

Applicants respectfully submit that the amendments add no new matter and are fully supported by the application as originally filed.